

03-05-05

ATTORNEY DOCKET NO. 21108.0040U1 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)			
Kyrkanides)	Art Unit:	1632	
Application No. 10/781,142)	Examiner:	Hama,	Joanne
Filing Date: February 18, 2004)	Confirmation	No.	3987
For: VECTORS HAVING BOTH ISOFORMS OF BETA-HEXOSAMINIDASE AND)			
USES OF THE SAME)			

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C. Customer Number 23859

Sir:

Pursuant to the requirements of 37 C.F.R. § 1.56, submitted herewith on the accompanying Information Disclosure Statement List is a listing of documents known to Applicants and/or their attorneys. In accordance with 37 C.F.R. §1.98(a)(2), copies of any cited U.S. patent or U.S. patent application publication documents are not enclosed. Copies of any cited foreign patent document and/or any non-patent publication are enclosed.

In accordance with the provisions of M.P.E.P. § 2001.06(b) and 37 C.F.R. § 1.98(b)(3), Applicants would like to bring to the attention of the Examiner the existence of the co-pending patent application(s) identified below, which were filed in the United States Patent and

Trademark Office: 03/10/2005 HTECKLU1 00000008 10781142 01 FC:1806

180.00 OP

	Application No.	Date Filed	<u>Inventors</u>	Attorney Docket No.
1.	*10/978,927	5/2/03	Kyrkanides	21108.0018U2
2.	*PCT/US04/04914	2/19/04	Kyrkanides et al.	21108.0022P1

The pending application(s) identified with an asterisk (*) are stored in the Image File Wrapper (IFW) system of the USPTO. Accordingly, copies of the cited specification(s), including the claims and drawings thereof, are not enclosed in accordance with the waiver to 37 CFR 1.98(a)(2)(iii) dated September 21, 2004.

This Information Disclosure Statement is believed to be filed in a timely manner pursuant to 37 C.F.R. § 1.97(b)(3), in that a first Office Action on the merits of the present patent application has not yet been mailed to Applicants.

Consideration of the cited documents and making the same of record in the prosecution of the above-referenced application are respectfully requested.

A Credit Card Payment Form PTO-2038 authorizing payment in the amount of \$180.00 for the filing of an Information Disclosure Statement under 37 C.F.R. § 1.17(p) is submitted; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

ATTORNEY DOCKET NO. 21108.0040U1 Application No. 10/781,142

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.

David E. Huizenga Registration No. 49,026

NEEDLE & ROSENBERG, P.C. Customer Number 23859 (678) 420-9300 (678) 420-9301 (fax)

CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence, including any items indicated as attached or included, is being deposited with the United States Postal Service as Express Mail Label No. EL 970612066 US in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, NA 22373-1450, on the date indicated below.

Scott Darnell

Date





Information Disclosure Statement List

(Use as many sheets as necessary)

	Complete if Known
Application Number	10/781,142
Filing Date	February 19, 2004
First Named Inventor	Kyrkanides
Group Art Unit	1632
Evaminer Name	JOANNE HAMA

Examiner's Initials	Cite No.	Document No.	[ate		Name	Class	Subclass	Filing Date (if appropriate
	A1	5,217,865	10/3	1/88	Myei	rowitz	1		
	A2	6,258,556	07/1	0/01	Uhl e				
	A3	6,103,492	08/1						
	A4	2002/0147170	10/1	0/02	Kopi	n et al.			
	A5	2002/0068354	06/0	3/02		ston et al.			
g : 5a :	07:2 <i>8</i>	WASTER AND A NEW YORK	* *F(REIGN	PATE	NT DOCUMEN	TS	Chr. Mary	
Examiner's Initials	Cite No.	Foreign Patent Docu Country Code-Number-Kind	ment	Da		Na			ranslation Yes/No
	A6	WO 2004/073646	3	9/06/0	4	Kyrkanides			
255714.445									
Examiner's Initials	Cite No.	No	on-Pate	nt Citation	S (include	Author, Title, Publisher, F	televant Page	s, Date and Plac	
	A7	Adamo et al. (20 transforming grow	vth fa	ctor-beta	a and f	GE2 exposure.	J Oral I	mplantol 2	27: 25-31.
	A8	architecture and 69-76.	Akima et al., A study on the microvasculature of the cerebellar cortex. The fundamental architecture and its senile change in the cerebellar hemisphere, Acta Neuropathol. 75 (1987)						leuropathol. 75 (1987)
	A9	Akli et al. (1996) adenoviral vector							ay-Sachs fibriblasts via
	A10		Alisky et al. Transduction of murine cerebellar neurons with recombinant FIV and AAV5 vectors, Mol. Neurosci. 11 (2000) 2669-2673.						
	A11	Asipu MA. et al.,	Asipu MA. et al., The specificity of the myelin basic protein gene promoter studied in transgenic mice. Biochemical & Biophysical Research Communications. 288(4):809-18, 2001						
	A12	Barranger et al. Lessons learned from the development of enzyme therapy for Gaucher disease, J. Inherit. Metabol. Disord. 24 (2001) 89-96.							
	A13	Bartlett and Samulski (1998) Fluorescent viral vectors: A new technique for the pharmacological analysis of gene therapy. Nat Medicine 4: 635-637.							
	A14	Bartlett et al. (2000) Infectious entry pathway of adeno-associated virus and adeno-associated virus vectors. J Virology 74: 2777-2785					s and adeno-associated		
	A15	Bellinger et al. (2001) Effects of interleukin-2 on the expression of corticotropin-releasing hormone in nerves and lymphoid cells in secondary lymphoid organs from the Fischer 344 rat. J Neuroimmunol 119: 37-50.							
	A16	Belsham and Sor	Belsham and Sonenberg (1996, Microbiological Reviews, 60:499-511)						
	A17	Ben-Shachar et al. (1988a) Picrotoxin, a γ-aminobutyric acid-receptor antagonist, retards craniofacial development in the weaning rat: I. Effect on mandibular bone growth. J Craniofac Genet Develop Biol 8: 351-361.				ne growth. J Craniofac			
	A18		lopme	ent in the	wear	ing rat: II. Effec			ceptor antagonist, retards ondylar cartilage. J

U.S. PATENT DOCUMENTS

Examiner Signature:	Date Considered:
EXAMINER: Initial if reference considered, whether or n	of citation is in conformance with MPEP 600: Draw line through citation if not in

conformance and not considered. Include copy of this form with next communication to applicant.

		Application Number	Complete if Known
		Application Number	10/781,142
Informa	ation Disclosure	Filing Date	February 19, 2004
Sta	atement List	First Named Inventor	Kyrkanides
	many sheets as necessary)	Group Art Unit	1632
(00000	many choose as necessary,	Examiner Name	JOANNE HAMA
A19	Beutler, "Advances in Genetics vol.44 pgs. 93-100	, Chp 9: Subunit Sturctu	re ofHexaminidase Isoenzymes:" 200
A20	Birkenmeier et al. Increased life		metabolic defects in murine arrow transplantation. Blood 78 (199
A21			fer in adult neurons with a lentivirus
A22		nce between expression	and genome transfer titering of HSV umeration. Mol Ther 1:294-9.
A23	Bradl, M., A. Flugel, The role of (2002) 141-162.	T cells in brain patholog	y, Curr. Topics Microbiol. Immunol. 2
A24			nd release toxic factors in response to 25-239.
A25	Brooks et al. (2002). Functions	al correction of establish age disease with feline i	ed central nervous system deficits in munodeficiency virus-based vectors
A26	Brooks et al. (1997). Nerve groexpression of cre recombinase.	owth factor somatic mosa	aicism produced by herpes virus-direc
A27	Brooks et al. Enzyme replacen	nent treatment for Tay-S ed hexosaminidase A up	achs disease brain cells in culture otake: biochemical and morphological
A28		ation of corticotropin-rele	asing factor in primary and secondary
A29	Burns et al. (1993) Vescicular	stomatitis virus G-glycop and efficient gene trans	rotein pseudotyped retroviral vectors: fer into mammalian and nonmammalia
A30		alities of cellular immun	ty and natural killer cells in Gaucher's
A31		vivo levels of neurotrans	smitters to trigeminal motoneurons: : 369-383.
A32	Cannon PM, Anderson WF (20) therapeutic mechanisms and stance, New York, pp 1-16.	00) Retroviral vectors fo trategies. NS Templeton	r gene therapy. In Gene Therapy: and DD Lasic, Editors. Marcel Dekke
A33	Capecchi et al "Targeted Gene		
A34	protein-lipid interactions, J. Viro	ol. 76 (2002) 3756-3764.	
A35	gangliosidoses. Mol Med Toda	y 4: 158-65.	rategies for the treatment of GM ₂
A36	brain. Genesis: the Journal of C	Senetics & Development	
A37	Cohen MM Jr. Kreiborg S. The 35: 36-45. (1990)	central nervous system	in the Apert syndrome. Am J Med Ge

Examiner Signature:	Date Considered:
EXAMINER: Initial if reference considered, whether	or not citation is in conformance with MPEP 609; Draw line through citation if not in
conformance and not considered. Include copy of this for	orm with next communication to applicant.

		Application Number	Complete if Known 10/781,142	
l £	tion Disales	Filing Date	February 19, 2004	
intorma	ation Disclosure		l	
Sta	tement List	First Named Inventor	Kyrkanides	
	many sheets as necessary)	Group Art Unit	1632	
		Examiner Name	JOANNE HAMA	
A38	Cohen-Tannoudji et al. Disruption of murine Hexa gene leads to enzymatic deficiency neuronal lysosomal storage, similar to that observed in Tay-Sachs disease. Mamm G 6(12):844-9 (1995)			
A39			iencies: residual activities and the : 58-71.	
A40		of the beta 3 subunit of	the type A gamma-aminobutyric acid	
A41	Curran et al. Efficient transduct Transplantation 74 (2002) 299-	tion of pancreatic islets t	by feline immunodeficiency virus vector	
A42	Daly et al. (1999) Neonatal ger murine model of lysosomal stor		spread correction of pathology in a Acad Sci USA 96: 2296-2300.	
A43		ronidase expression in s	recombinant adeno-associated virus itu and correction of liver pathology in 10: 85-94.	
A44	Daly Tm, Lorenz RG, Sands MS lysosomal storage disease. Ped		une function in vivo in a murine model	
A45		emic clinical disease in l	MPS VII mice following AAV-mediated 3.	
A46	Deng et al. (1998) Luciferase: a sensitive and quantitative probe for blood-brain barrier disruption. J Neurosci Methods 83: 159-164.			
A47	Duvernoy, H., S. Delon, J.L. Va Res. Bull. 11 (1983) 419-480.	nnson, The vascularizat	ion of the human cerebellar cortex, Bra	
A48	Dziennis et al. The CD11b pron macrophages in transgenic mic			
A49		trial of enzyme replacen	nent in fabry disease: pharmacokinetic,	
A50	Enlow DH, Hans MG (1996) Es	sentials of facial growth.	. W.B.Saunders Co, New York.	
A51	August 2003. 55(8):1055-1064	•	in," Advanced Drug Delivery Reviews	
A52	Forss-Petter et al. (1990). Transgenic mice expressing β-galactosidase in mature neurons under neuron-specific enolase promoter control. Neuron 5: 187-197.			
A53	cerebellum and spinal cord. Bra	Fournet et al. (1986) Selective localization of calcium-binding protein in human brainstem, cerebellum and spinal cord. Brain Res 399: 310-316.		
A54	function in a murine model of m	nucopolysaccharidosis ty	no-associated virus improves cognitive pe VII, Mol. Ther. 3 (2001) 351-358.	
A55	Appl. Neurobiol. 27 (2001) 127-	-138.	ervous system diseases, Neuropath.	
A56	and cultured endothelial cells.	Ann NY Acad Sci 481: 2		
A57	MM and Levin LS (Eds). Oxford	University Press, New		
A58	Gravel et al. Biochemistry and (Suppl):419-23 (1991)	genetics of Tay-Sachs d	isease. Can J Neurol Sci. 18(3	

Examiner Signature:	Date Considered:
EXAMINER: Initial if reference considered, whether or no conformance and not considered. Include copy of this form v	t citation is in conformance with MPEP 609; Draw line through citation if not in with next communication to applicant.

		Complete if Known		
		Application Number	10/781,142	
Inform	ation Disclosure	Filing Date	February 19, 2004	
	Statement List		Kyrkanides	
		Group Art Unit	1632	
(Use as	many sheets as necessary)	Examiner Name	JOANNE HAMA	
A59	Greenwood et al. Lymphocyte	adhesion and transende	othelial migration in the central nervous	
,	system: the role of LFA-1, ICAN			
A60			tentialtes morphine antinocoception	
	effect." Society for Neuroscience			
A61	deficient knockout mice. Hum M	10l Genet 8: 831-838.	ay-Sachs disease in hexosaminidase A	
A62	Bioch Biophys Res Comm 229:	295-298.	t creation of stable mammalian cell lines.	
A63	Halterman et al. Hypoxia-induci death that involves p53. Journa		les hypoxia-induced delayed neuronal 6):6818-24, 1999.	
A64	Havenga et al. (1998). Second intercistrons and viral IRES seq		stronic constructs using short synthetic -327.	
A65	Hickey WF (1991) Migration of initiation of CNS inflammation.		ough the blood-brain barrier and the	
A66	Hickey, et al. Bone marrow derived elements in the central nervous system: an immunocytochemical and ultrastructural survey of rat chimeras, J. Neuropath. Exp. Neurol. 51 (1992) 246-256.			
A67		Hickey, W.F., B.L. Hsu, H. Kimura, T-lymphocyte entry into the central nervous system, J.		
A68		of immunological surveill	ance of the normal central nervous	
A69		(1994). The effects of fa	scial nerve ablation on craniofacial Surg 93: 1236-1240.	
A70	Huang et al. (2001) Absence o decreased local macrophage re	f monocyte chemoattrac cruitment and antigen-s	tant protein 1 in mice leads to pecific T helper cell type 1 immune	
A71	response in experimental autoimmune encephalomyelitis. J Exp Med 193: 713-26. Huang JQ, Trasler JM, Igdoura S, Michaud J, Hanal N. Gravel RA (1997) Apoptotic cell death in mouse models of GM2 gangliosidosis and observations on human Tay Sachs and Sandhoffs diseases. Hum Mol Genet 6: 1879-85			
A72	Huard, et al. , The route of adm of rat tissues by adenoviral reco		terminant of the transduction efficiency 2 (1995) 107-115.	
A73	Invitrogen ViraPiwer T-Rex Len			
A74	Izikson et al. (2002) Targeting Immunol 103:125-131.	monocyte recruitment in	CNS autoimmune disease. Clin	
A75	Jang et al. (1989, J. of Virology, 63:1651-1660)			
A76	Jeyakumar et al. (2003). Central nervous system inflammation is a hallmark of pathogenesis in mouse models of GM1 and GM2 gangliosidosis. Brain 126: 974-987.			
A77		sfer using a nonprimate	entiviral vector pseudotyped with ross	
A78	Kessler et al. The human tyros Brain Research. 112(1-2):8-23,	ine hydroxylase gene pr 2003	omoter. Brain Research. Molecular	
A79				

Examiner Signature:	Date Considered:
EXAMINER: Initial if reference considered, whether or no conformance and not considered. Include copy of this form v	ot citation is in conformance with MPEP 609; Draw line through citation if not in with next communication to applicant.

		A - alia - tia - Novembra	Complete if Known	
		Application Number	10/781,142	
Inform	nation Disclosure	Filing Date	February 19, 2004	
Si	tatement List	First Named Inventor	Kyrkanides	
	as many sheets as necessary)	Group Art Unit	1632	
(000)	is many energy as necessary,	Examiner Name	JOANNE HAMA	
A80	Kjaer et al. (1999) The prenata	al human cranium-Norma	al and pathologic development.	
	Munksgaard, Copenhagen, pp		, ,	
A81	Kjaer I (1998) Neuro-osteology			
A82	arthritis. J Clin Invest 90: 772-9).	hemoattractant protein-1 in rheumatoid	
A83	Kolodny, "Advances in Genetic Isoenzymes: An introduction" 2		netics of the Beta-Hexaminidase	
A84	Kordower et al. (1999) Lentivir 1-16.	al gene transfer to the no	onhuman primate brain. Exp Neurol 16	
A85	hexosamindase. Extensive ho	mology between the alph	alpha-subunit of human beta- na- and beta- subunits and studies on No. M13520. (Sequence Alignment onl	
A86		ation of promoter eleme	hloramphenicol acetyltransferase fusionts in vivo and in cultured cells.Molecul	
A87	Kuchroo, et al., T cell respons	se in experimental autoin s in shaping, tuning and	nmune encephalomyelitis (EAE): role or regulating the autopathogenic T cell	
A88		poromandibular Joint noc	ciception: effects of capsaicin on em. J Orofac Pain 16:229-235.	
A89		asilar part of the occipita	ll bone in normal and pathological	
A90	Kyrkanides et al. (1995) Skele	tal asymmetries of the na	asomaxillary complex in non-cleft and Cleft Palat Craniofac J 32: 428-32.	
A91	Kyrkanides et al. (1996) Asym unilateral cleft lip and palate in		and nose in non-cleft and post-surgical aniofac J 33: 306-310.	
A92	Kyrkanides et al. (1999). TNF interaction in CNS radiation inju		M-1 induction via microglia-astrocyte 95-106.	
A93	inflammation-related molecules Neuroimmunol 119: 269-77.	Kyrkanides et al. (2001). Enhanced glial activation and expression of specific CNS inflammation-related molecules in aged versus young rats following cortical stab injury. J		
A94	Mol Brain Res 104: 159-169.	Kyrkanides et al. (2002a) COX-2 modulates inflammation related genes in CNS radiation inju		
A95	Kyrkanides et al. (2003) Transcriptional and post-translational regulation of Cre recombinase by RU486 as the basis for an enhanced inducible expression system. Molecular Therapy, 8:790-795			
A96	cells and Purkinje neurons. Mo	l Brain Res 119: 1-9.	tration: Transduction of CNS immune	
A97	unilateral cleft lip & palate. Cle	ft Palate-Craniofacial Jou		
A98		ssion of human b-hexosa	aminidase a-subunit gene in mouse	

Date Considered:			
Date Considered.			
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in			
conformance and not considered. Include copy of this form with next communication to applicant.			

Application Number In/0781,142				Complete if Known
Statement List (Use as many sheets as necessary) First Named Inventor Kyrkanides Group Art Unit 1632 Examiner Name JOANNE HAMA A99 Lipschutz et al. (2001). In utero delivery of adeno-associated viral vectors: Intraperitoneal gene transfer produces long term expression. Mol Ther 3: 284-92. A100 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A101 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A102 Liu et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Cil In Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Azheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Seguence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A111 Munier-Lehmann et al. (1996) Re-expression of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. "Huma			Application Number	10/781,142
First Named Inventor Kyrkanides Group Art Unit 1632 Examiner Name JOANNE HAMA	Informa	Information Disclosure		February 19, 2004
(Use as many sheets as necessary) Examiner Name A99 Lipschutz et al. (2001). In utero delivery of adeno-associated viral vectors: Intraperitoneal gene transfer produces long term expression. Mol Ther 3: 284-92. A100 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A101 Liu et al. Transgenic mice expressing green fluorescent protein under the control of the melanocortin-4 receptor promoter. Journal of Neuroscience. 23(18):7143-54, 2003 A102 Liu Y et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci. Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lyososmal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AFO14805, Sequence Alignment Only Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Mignetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mulien et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 Mignetu-Lehmann et al. (1996) R	_	Statement List		Kyrkanides
Examiner Name JOANNE HAMA				1632
transfer produces long term expression. Mol Ther 3: 284-92. A100 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A101 Liu et al. Transgenic mice expressing green fluorescent protein under the control of the melanocortin-4 receptor promoter. Journal of Neuroscience. 23(18):7143-54, 2003 A102 Liu Y et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martin et al. EMBL Database No. AF014805, Sequence Alignment Only A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product affer intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mulen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-2211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A111 NBCI pr	(Ose as in	nany sneets as necessary)	Examiner Name	JOANNE HAMA
transfer produces long term expression. Mol Ther 3: 284-92. A100 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A101 Liu et al. Transgenic mice expressing green fluorescent protein under the control of the melanocortin-4 receptor promoter. Journal of Neuroscience. 23(18):7143-54, 2003 A102 Liu Y et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient florbolasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805. Sequence Alignment Only A107 Martin et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) Neun, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed actin. Proc. Natl. Acad. Sc	A99	Linschutz et al. (2001). In utero	delivery of adeno-asso	ciated viral vectors: Intraperitoneal gene
A100 Liu et al. (1997) The mature osteoblasts phenotype is characterized by extensive plasticity. Exp Cell Res 232: 97-105. A101 Liu et al. Transgenic mice expressing green fluorescent protein under the control of the melanocortin-4 receptor promoter. Journal of Neuroscience. 23(18):7143-54, 2003 A102 Liu Y et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalilles in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts.]EMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martin et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. (2002) Molecular patho				
melanocortin-4 receptor promoter. Journal of Neuroscience. 23(18):7143-54, 2003 A102 Liu Y et al. (1999) A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of Iyosoomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts.]EMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nibric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy. Acta Neuropathol. 97 (1999)	A100	Liu et al. (1997) The mature os		
storage disorder. J Clin Invest 103: 497-505. A103 Lombardi et al. (1998) Microglial activation induced by factor(s) contained in sera from Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mulien et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996) Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci. (1985) vol 82, Accession No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1	A101			
Alzheimer-related ApoE genotypes. J Neurosci Res 54: 539-53. A104 Lu et al. Abnormalities in monocyte recruitment and cytokine expression in monocyte chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophyslology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci. (1985) vol 82, Accession No. A23561 (Sequence Alignment Only) Nakamura et al. An immunohistochemical study of Purkinja cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors)	A102			ition therapy for a glycosphingolipid
chemoattractant protein 1-deficient mice. J. Exp Med. 187(4):601-8 (1998) A105 Ludwig et al. (1994) Differential sorting of lysosomal enzymes in mannose 6-phosphate receptor-deficient fibroblasts. JEMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: odding sequence and homology with the beta chain." Proc. Natl. Acad. Sci. (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Noete et al. "GPAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain	A103			
receptor-deficient fibroblasts.]EMBO 13: 3430-3437. A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMed printout, Nakai, Byers, Nowak, and Shows (authors) one page Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment Nolte et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignme	A104			
A106 Martin et al EMBL Database No. AF014805, Sequence Alignment Only A107 Martino et al. Absence of metabolic cross-correction in Tay-Sachs cells, J. Biol. Chem. 277 (2002) 20177-20184. A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Blochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal betahexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Notle et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001	A105			
A108 McCormack et al. (2001). Factors affecting long-term expression of a secreted transgene product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal betahexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A106			
product after intravenous administration of a retroviral vector. Mol Ther 3: 516-525. A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accession No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal betahexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue, GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A107			
A109 Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on prostanoids and nitric oxide. Prog in Neurobiol 54: 99-125. A110 Mulien et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A108			
A110 Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116: 201-211. A111 Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A109	Minghetti L, Levi G (1998) Microglia as effector cells in brain damage and repair: focus on		
receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate receptors in lysosomal enzyme targeting. J Biol Chem 271: 15166-15174. A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A110	Mullen et al. (1992) NeuN, a neuronal specific nuclear protein in vertebrates. Development 116:		
A112 Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in lysosomal enzyme transport. Biochem Soc Trans 24: 133-136 A113 Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A111	Munier-Lehmann et al. (1996) Re-expression of the mannose 6-phosphate receptors in receptor-deficient fibroblasts. Complementary function of the two mannose 6-phosphate		
revealed by gene expression profiling. Hum Mol Genet 11: 1343-1350. A114 Myerowitz et al. "Human beta-hexosamindase alpha chain: coding sequence and homology with the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A112	Munier-Lehmann et al. (1996). Function of the two mannose 6-phosphate receptors in		
the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence Alignment Only) A115 Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A113	Myerowitz et al. (2002) Molecular pathophysiology in Tay-Sachs and Sandhoff diseases as		
cerebellar cortical atrophy, Acta Neuropathol. 97 (1999) 196-200. A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A114	the beta chain." Proc. Natl. Acad. Sci, (1985) vol 82, Accesion No. A23561 (Sequence		
A116 NBCI printouts, nucleotide sequences, 20 genes, 30 pages A117 NBCI PubMEd printout, Nakai, Byers, Nowak, and Shows (authors) one page A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A115	Nakamura et al. An immunohistochemical study of Purkinje cells in a case of hereditary		
A118 Neote et al. "Characterization of the Human HEXB Gene encoding lysosomal beta-hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A116	NBCI printouts, nucleotide sequences, 20 genes, 30 pages		
hexosamindase." Genomics 3. 1988. Accession No. A31250. Sequence alignment A119 Nolte et al. GFAP promoter-controlled EGFP-expressing transgenic mice: a tool to visualize astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates				
astrocytes and astrogliosis in living brain tissue. GLIA. 33(1):72-86, 2001 A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A118			
A120 Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates	A119			
Troditions in calciner disease fince. 9 only invest 101.1001-1000.	A120	Norflus et al. (1998) Bone man	row transplantation prolo	ongs life span and ameliorates

A120	Norflus et al. (1998) Bone marrow transplantation prolongs life span and ameliorates neurologic manifestations in Sandhoff disease mice. J Clin Invest 101:1881-1888.		
Examiner Signatu	re: Date Considered:		
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

		Application Number	Complete if Known
		Application Number	10/781,142
Information Disclosure		Filing Date	February 19, 2004
Statement List		First Named Inventor Group Art Unit	Kyrkanides
	(Use as many sheets as necessary)		1632
,	,	Examiner Name	JOANNE HAMA
A121	Norflus et al. Promoters for the Biol. 15(2):89-97 (1996)	human beta-hexosamin	idase genes, HEXA an HEXB. DNA Cell
A122			pharmacology, and neurobiology, Crit.
A123		icroglia in cortex of mou	se models of mucopolysaccharidoses I
A124		SV-1 amplicons elicit a n	narkedly less robust innat immune
A125	Oya et al. (2000) Distribution of enzyme-bearing cells in GM2 gangliosidosis mice: regionally specific pattern of cellular infiltration following bone marrow transplantation. Acta Neuropathol 99: 161-168.		
A126	Peel et al. Efficient transduction of green fluorescent protein in spinal cord neurons using adeno-associated virus vectors containing cell type-specific promoters. Gene Therapy. 4(1):16-24, 1997		
A127	Phaneuf et al. (1996) Dramatically different phenotypes in mouse models of human Tay-Sachs and Sandhoff diseases. Hum Mol Genet 5: 1-14.		
A128	Poeschla EM, Wong-Stall F, Looney DL (1998) Efficient transduction of nondividing human cells by feline immunodeficiency virus lentiviral vectors. Nature Medicine 4: 354-357.		
A129	Popovic et al. ID (2002) Inhibition of autoimmune encephalomyelitis by a tetracycline. Ann Neurol 51: 215-23.		
A130	Porada et al. In utero gene therapy: transfer and long term expression of the bacterial neo(r) gene in sheep after direct injection of retroviral vectors into preimmune fetuses, Hum. Gene Ther. 9 (1998) 1571-1585.		
A131	Priller et al. (2001a) Targeting gene-modified hematopoietic cells to the central nervous system: Use of green fluorescent protein uncovers microglial engraftment. Nat. Med. 7: 1356-1361.		
A132	Priller et al. (2001b) Neogenesis of cerebellar Purkinje neurons from gene-marked bone marrow cells in vivo. J Cell Biol 155: 733-738.		
A133	Priller, J., Grenzganger: adult bone marrow cells populate the brain. Histochem Cell Biol. 120(2):85-91 (2003)		
A134	Proia "Advances in Genetics, Chp 11: Clong the Beta-Hexaminidase Genes" 2001 vol.44 pgs. 127-136		
A135	Proia et al. (1984). Association of a- and b- subunits during the biosynthesis of b- hexosaminidase in cultured human fibroblasts. J Biol Chem 259: 3350-3354.		
A136	Proia et al. "Gene encoding the human beta-hexosamindase beta chain: extensive holomogy of intron placement in the alpha- and beta- chain genes." Proc. Natl. Acad. Sci. (1988) 85:6 Sequence Alignment Only		
A137	Purpura DP and Suzuki K (1976). Distortion of neuronal geometry and formation of aberrant synapses in neuronal storage disease. Brain Res 116:1-21.		
A138	Ransohoff et al. (1993) Astrocyte expression of mRNA encoding cytokines IP-10 and JE/MCP-1 in experimental autoimmune encephalomyelitis. FASEB 7: 592-600.		
A139		om-dependent expression	on of proteins in brain endothelium

Examiner Signature:	Date Considered:		
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

			Complete if Known
		Application Number	10/781,142
Informa	tion Disclosure	Filing Date	February 19, 2004
Statement List		First Named Inventor	Kyrkanides
		Group Art Unit	1632
(Use as n	nany sheets as necessary)	Examiner Name	JOANNE HAMA
1 4 4 4 5	I 5: 14 14 11 11 (1000) B	I	
A140	Risau W, Wolburg H (1990) De		
A141	Disease, 6 th edition; Cotran, Ku 1268	mar & Collins (Ed), W.B.	s. In Robbins Pathologic Basis of Saunders Co, New York. pp 1215-
A142			of accumulated substrates in cultured as of Sandhoff disease. Clin Chim Acta
A143	Collagen Genes (1990) In Extra	acellular matrix genes. pj	uence and Functional Elements within o 1-56, Academic Press New York.
A144	Invest. 93 (1994) 2324-2331.		nucopolysaccharidosis type VII, J. Clin
A145	gangliosidosis and mucopolysa	ccharidosis. Nature Gen	
A146	Sango K et al. (1995) Mouse models of Tay-Sachs and Sandhoff diseases differ in neurologic phenotype and ganglioside metabolism. Nature Genet 11: 170-176.		
A147	Schmued et al. (1997) Fluoro-Jade: a novel fluorochrome for the sensitive and reliable histochemical localization of neuronal degeneration. Brain Res 751: 37-46.		
A148	Schroeder et al. (1995) Developmental regulation of the human antibody repertoire. Ann NY Acad Scie 764: 242-260.		
A149	Scott-Burden et al. (2002) Use of autologous auricular chondrocytes for lining artificial surfaces: A feasibility study. Ann Thorac Surg 73: 1528-33.		
A150	Sinsel et al. (1998). The effect of unilateral partial facial paralysis and muscle ablation on craniofacial growth and development: An experimental study in the rabbit. Plast Reconstr Surg 102: 1894-1912.		
A151	Stein et al. "Attacking pain at its source: new perspectives on opiods." Nature Medician. August 2003. 9(8):1003-1008		
A152	Strausberg, Acession No. BC01		
A153	Suzuki et al. (1988) The twitcher mouse: central nervous system pathology after bone marrow transplantation. Lab Investigator 58: 302-309.		
A154	Suzuki et al. (1997) Mice deficient in all forms of lysosomal β-hexosaminidase show mucopolysaccharosis-like pathology. J Neuropath Exp Neurol 56: 693-703		
A155	Swanborg, R.H., Experimental autoimmune encephalomyelititis in the rat: lessons in T-cell immunology and autoreactivity, Immunol. Rev. 184 (2001) 129-135.		
A156	Szpak et al. (2001) Neurones and microglia in central nervous system immune response to degenerative processes. Part 1: Alzheimer's disease and Lewy body variant of Alzheimer's disease. Quantitative study. Folia Neuropathol 39: 181-92.		
A157	Sachs disease. Acta Neuropath	nol (Berl.) 89(4):296-304	
A158	based vector systems. Mol The	r 3: 128-138.	gene transfer: studies with retroviral-
A159			sion of β-hexosaminidase α-chain cDN it, Hum. Gene Ther. 12 (2001) 1771-

Examiner Signature:	Date Considered:
EXAMINER: Initial if reference considered, whether or no conformance and not considered. Include copy of this form	ot citation is in conformance with MPEP 609; Draw line through citation if not in with next communication to applicant.

			Complete if Known	
		Application Number	10/781,142	
Information Disclosure		Filing Date	February 19, 2004	
Statement List		First Named Inventor	Kyrkanides	
		Group Art Unit	1632	
(Ose as i	(Use as many sheets as necessary)		JOANNE HAMA	
A160			alpha 2-chain binding protein at the glial-	
A161	vascular interface and is expressed in Purkinje cells, Eur. J. Neurosci. 8 (1997) 2739-2747 Utsumi et al. (2002) Western blotting analysis of the beta-hexosaminidase alpha- and beta-subunits in cultured fibroblasts from cases of various forms of GM2 gangliosidosis. Acta Neurol Scand 105:427-30.			
A162	Vanden-Berghe, D.A., Comparison of various density-gradient media for the isolation and characterisation of animal viruses. In D. Rickwood (Ed.), Iodinated density gradient media-a practical approach, Oxford University Press, Oxford, UK, 1983, pp. 175-193.			
A163	von Specht et al. B (1979) Enzyme replacement therapy for Tay-Sachs disease. Neurol 29: 848-854.			
A164	Wada et al. (2000) Microglial activation precedes acute neurodegeneration in Sandhoff disease and is suppressed by bone marrow transplatation. Proc. Natl. Acad. Sci. U.S.A. 97: 10954-9.			
A165	Wada et al. Mn-SOD and Bel-2 expression after repeated hyperbaric oxygenation. 76:285-90 (2000)			
A166	Walkley et al. (1991). Neuroaxonal dystrophy in neuronal storage disorders: evidence for major GABAergic neuron involvement. J Neurol Sci 104:1-8.			
A167	Walkley et al. Bone marrow transplantation corrects the enzyme defect in neurons of the central nervous system in a lysosomal storage disease, Proc. Natl. Acad. Sci. U.S.A. 91 (1994) 2970-2974.			
A168	Walkley SU (1998) Cellular pathology of lysosomal storage disorders. Brain Path 8:175-193.			
A169			, Int Rev Neurobiol. 1988; 29:191-244.	
A170	(1995) 1382-1383.		n for lysosomal diseases, Lancet 345	
A171	Weimann et al., Contribution of transplanted bone marrow cells to Purkinje neurons in human adult brain, Proc. Natl. Acad. Sci. U.S.A. 100 (2003) 2088-2093.			
A172	Westerman KA, Leboulch P. Reversible immortalization of mammalian cells mediated by retroviral transfer and site-specific recombination. Proc. Natl. Acad. Sci. USA 93: 8971-8976, 1996.			
A173	Wolff JA, Harding CO (2000) Principles of gene therapy for inborn errors of metabolism. In Gene Therapy: therapeutic mechanisms and strategies. NS Templeton and DD Lasic, Editors. Marcel Dekker Inc, New York, pp 507-533.			
A174	Wood et al. (1989, Nucleic Acid Research, 17:2368)			
A175	Xu et al. "Adeno-associated viral transfer of opiod receptor gene to primary sensory neurons: a strategy to increase opiod antinociception" Proc. Natl. Acad. Sci. May 2003 100(10)6204-6209			
A176	Xu et al. "Adeno-associated virus mediated gene expression in dorsal root ganglia following remote vector delivery." Society for Neuroscience Abstracts 2001, 27(2):1607			
A177	Xu et al. "Efficiencies of tragens expression in nococeptive neurons through different routes of delivery of adeno-associated viral vectors: Human Gene Therapy June 2003 14(9):897-906			
A178	Xu et al. "Enhanced expression of mu-opoiod receptors in sensory neurons using adeno- associate viral vectors" Society for Neuroscience Abstracts 2000, 26(1-2):1662, Abstract 608.7			
A179	Yamanaka et al. Targeted disruption of the Hexa gene results in mice with biochemical and pathologic features of Tay-Sachs disease. 91(21):9975-9 (1994)			

Examiner Signature:	Date Considered:		
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

Complete if Known 10/781,142 **Application Number Information Disclosure** Filing Date February 19, 2004 First Named Inventor Kyrkanides Statement List 1632 Group Art Unit (Use as many sheets as necessary) JOANNE HAMA **Examiner Name** Yaworsky et al. Transgenic analyses reveal developmentally regulated neuron- and muscle-A180 specific elements in the murine neurofilament light chain gene promoter. Journal of Biological Chemistry. 272(40):25112-20, 1997 A181 Yrianheikki et al. (1998) Tetracyclines inhibit microglial activation and are neuroprotective in global brain ischemia. Proc Natl Acad Sci USA 95: 15769-74. Yrjanheikki et al. (1999) A tetracycline derivative, minocycline, reduces inflammation and A182 protects against focal cerebral ischemia with a wide therapeutic window. Proc Natl Acad Sci USA 96: 13496-500 A183 Zhang et al. , A highly efficient and consistent method for harvesting large volumes of high-titre lentiviral vectors, Gene Therapy 8 (2001) 1745-1751. A184 Zhou et al. (1998) Temperature-sensitive neuromuscular transmission in Kv1.1 null mice: Role of potassium channels under the myelin sheath in young nerves. J. Neurosci 18: 7200-15) A185 Zhou et al. Frontotemporal dementia: neuropil spheroids and presynaptic terminal degeneration, Ann. Neurol. 44 (1998) 99-109.

Examiner Signature:	Date Considered:	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.